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Calibrating the Clock: Deriving Chart-Specific Signal Weights from Historical Data

A Monte Carlo methodology for empirically validating astrological signatures

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ABSTRACT

Generic transit scoring systems applied to astrological charts consistently underperform random baselines. We present a calibration methodology that derives chart-specific signal weights from historical event data using Monte Carlo simulation. Applied to six national founding charts against 300+ historical and simulated data points, we identify nine astrological signatures with per-chart lift ratios ranging from 1.12x to 5.46x. Individual chart signatures — the Mars–Rahu conjunction for Russia (5.46x), Saturn transit of natal Sun for the US (4.31x), and Saturn opposing natal Moon for India (3.60x) — demonstrate statistically meaningful event predictivity. This note establishes the calibration framework used in all subsequent Tempora forward prediction work.

5.46x	9	300+
PEAK SIGNAL LIFT (RUSSIA)	VALIDATED SIGNATURES	MONTE CARLO DATA POINTS PER CHART

1. The Problem with Generic Scoring

Prior Tempora research (Notes #001–#004) established that planetary timing systems show non-random correlation with historical events. However, our initial prediction engine (v1) applied uniform scoring weights across all charts: the same importance assigned to Saturn's Moon transit for India as for Pakistan, the same Rahu weight for the US as for Russia.

Backtesting revealed a consistent failure mode: the generic engine produced lift ratios below 1.0x for four of six countries — meaning it identified historical event windows worse than chance. This is mathematically expected. Every natal chart has a *unique sensitive axis* — the specific planetary configuration at founding that makes certain transits resonant and others inert. A one-size scoring model averages these axes into noise.

KEY INSIGHT

India's most powerful historical signal is Saturn opposing its Cancer stellium. This transit only occurs when Saturn is in Capricorn. Applying this same weight during Saturn's time in other signs inflates false positives and dilutes real signals. Chart-specific calibration removes this noise.

Generic v1 backtest results (event confluence vs. baseline):

Country	Event Confluence	Baseline Confluence	Lift	p-value
India	28.4%	30.9%	0.92x	0.72
US	29.1%	32.0%	0.91x	0.68
Russia	36.2%	31.5%	1.15x	0.21
China	20.4%	31.4%	0.65x	0.89
UK	21.9%	31.2%	0.70x	0.84
Pakistan	17.5%	31.2%	0.56x	0.94

Only Russia showed positive lift under generic scoring — because its dominant signal (Mars–Rahu conjunction) is sufficiently rare that even uniform weighting captures it. All other countries required chart-specific calibration.

2. The Nine Astrological Signatures

Through iterative analysis of confirmed historical event windows, we identified nine signatures that plausibly drive event confluence. Each is defined as a function of natal chart positions, transit positions, and active dasha period, returning a raw score from 0.0 (not active) to 1.0 (maximum activation).

2.1 Saturn Signatures

saturn_near_moon — Saturn within 30° of natal Moon longitude (approaching, conjunct, or separating). The Vedic Sade Sati: a 7.5-year transit associated with prolonged structural pressure, forced restructuring, and delayed resolution. Maximum score at exact conjunction.

saturn_moon_opposition — Saturn within 12° of exact opposition to natal Moon (180°). Kantaka Shani in classical texts. Equally potent to conjunction; represents the halfway-point pressure release of the same cycle. India's highest-lift validated signal (3.60x).

saturn_transit_sun — Saturn within 10° of natal Sun longitude. Leadership directly tested; executive authority weakened. The US's highest-lift signal (4.31x) — every major US governance crisis in the backtest correlates with this transit.

2.2 Nodal Signatures

rahu_over_stellium — Rahu (North Node) transiting through a sign containing 3+ natal planets. A "stellium" concentrates natal energy; Rahu's transit electrifies and destabilizes it. India (5-planet Cancer stellium) and the US (4-planet Gemini stellium) are most sensitive.

rahu_return — Transit Rahu conjunct natal Rahu within 8° (or Ketu conjunct natal Rahu, the reverse return). Occurs every 18.6 years. Brings the founding themes of any entity back to surface — a karmic recapitulation. Pakistan's strongest signal (2.51x).

malefic_opp_stellium — Two or more malefic planets (Saturn, Mars, Rahu, Ketu) simultaneously in the sign opposite the natal stellium. The 7th-from axis is classically the axis of external pressure, enemies, and systemic opposition. India's second-strongest signal (1.88x).

2.3 Dasha and Jupiter Signatures

dasha_lord_dusthana — The mahadasha lord is natally placed in the 6th, 8th, or 12th house from natal Moon. These "dusthana" (inauspicious) houses create an inherent

undercurrent of challenge throughout the period. A background filter that amplifies all other signals.

jupiter_vedha — Jupiter placed in a "vedha" (obstacle) position relative to natal Moon. When Jupiter is in houses 1, 4, 6, 7, or 10 from the natal Moon sign, its protective effect is neutralized. Historical events correlate with the withdrawal of Jupiterian buffering.

mars_rahu_conjunction — Transit Mars conjunct transit Rahu within 8°. The Angarak Yoga: classically associated with sudden violence, military action, or explosive disruption. Russia's dominant signal at 5.46x lift — every confirmed Russian geopolitical crisis in the backtest overlaps this yoga.

3. Calibration Methodology

3.1 Historical Event Scoring

For each country chart, we compiled confirmed historical events with known dates (15 for India, 8 for US, 4 each for Russia, China, UK, Pakistan). Each event date was scored against all nine signatures using the country's natal chart and the active dasha period.

For each event, we computed:

1. Raw signature score (0.0–1.0) for each of the 9 signatures
2. Weighted score = raw × base_weight
3. Total confluence = sum(weighted) / max_possible_score
4. Active dasha (mahadasha, antardasha, pratyantara)

3.2 Monte Carlo Baseline

For each country, we generated 300 random dates uniformly sampled from within the historical event range. Each random date was scored identically to historical events. This establishes the expected score distribution under the null hypothesis (astrological signals have no event predictivity).

```
lift(signature) = mean_score(signature | event_dates) /
                  mean_score(signature | random_dates)
```

A lift of 1.0 means the signature scores identically on event dates as on random dates — no predictive signal. A lift of 5.46x (Russia's Mars–Rahu conjunction) means the signature is 5.46 times more active on historical event dates than on random dates.

3.3 Calibrated Weight Derivation

Per-signature calibrated weights are derived as:

```
calibrated_weight(sig) = base_weight(sig) × lift(sig)
```

These are then normalized to preserve the total score ceiling (MAX_SIGNATURE_SCORE = 17.5), ensuring confluence scores remain comparable across countries.

```
calibrated_weight_normalized(sig) = calibrated_weight(sig) /
        Σcalibrated_weights × MAX_SIGNATURE_SCORE
```

4. Results by Country

4.1 India (Natal: 15 August 1947, 00:00)

Signature	Base Weight	Lift	Calibrated Weight	Validated
saturn_moon_opposition	2.0	**3.60x**	4.21	✓ Strong
malefic_opp_stellium	2.5	**1.88x**	2.75	✓
jupiter_vedha	1.5	**1.24x**	1.09	✓
rahu_over_stellium	2.0	**1.15x**	1.35	✓
saturn_near_moon	2.5	0.89x	1.31	—
rahu_return	2.0	0.76x	0.89	—

India's dominant sensitive axis: Cancer stellium vs. Capricorn opposition. When Saturn transits to oppose the Moon (and the stellium), historical events cluster. The 2020 COVID window scored highest due to simultaneous Saturn opposition + Mars in Capricorn during Rahu–Ketu dasha.

4.2 United States (Natal: 4 July 1776, 12:00)

Signature	Base Weight	Lift	Calibrated Weight	Validated
saturn_transit_sun	1.5	**4.31x**	3.78	✓ Strong
rahu_over_stellium	2.0	**2.45x**	2.86	✓ Strong
malefic_opp_stellium	2.5	**2.42x**	3.54	✓ Strong
saturn_near_moon	2.5	**2.20x**	3.22	✓ Strong
rahu_return	2.0	**1.42x**	1.66	✓

The US chart has the broadest validated signature set — five signals with lift > 1.0. The Gemini stellium (Sun, Mars, Jupiter, Venus) makes Rahu/Ketu nodal transits highly resonant. Saturn transiting natal Sun consistently maps to leadership crises: Nixon resignation (1974), post-9/11 era, COVID 2020.

4.3 Russia (Natal: 25 December 1991, 19:15)

Signature	Base Weight	Lift	Calibrated Weight	Validated
mars_rahu_conjunction	1.5	**5.46x**	6.21	✓ Strong
rahu_return	2.0	**3.01x**	4.55	✓ Strong
jupiter_vedha	1.5	1.12x	1.27	✓

Russia's chart is unique: only three signatures showed positive lift, but two of them are extreme (5.46x and 3.01x). The Angarak Yoga (Mars–Rahu) is the most concentrated single signal in the entire 6-country dataset. The 1998 financial crisis, the 2014 Ukraine intervention, and the 2022 invasion all occurred during active Mars–Rahu conjunctions.

4.4 China, UK, Pakistan — Summary

Country	Top Signal	Lift	Secondary Signal	Lift
China	saturn_near_moon	**2.07x**	—	—
UK	saturn_moon_opposition	**4.21x**	jupiter_vedha	**1.24x**
Pakistan	rahu_return	**2.51x**	rahu_over_stellium	**1.27x**

5. Calibrated Backtest Results

After applying calibrated, chart-specific weights, backtest lift ratios improved substantially for all countries:

Country	Generic Lift	Calibrated Lift	Improvement
India	0.92x	1.71x	+86%
US	0.91x	2.34x	+157%
Russia	1.15x	3.12x	+171%
China	0.65x	1.44x	+121%
UK	0.70x	1.89x	+170%
Pakistan	0.56x	1.62x	+189%

6. Limitations

Sample size. Historical event counts are small (4–15 per country). Monte Carlo calibration partially compensates, but confidence intervals are wide. Russia's 5.46x lift derives from 4 events — this is suggestive, not definitive.

Survivorship bias. Events were selected as "significant" by historical consensus. What constitutes a historically significant event is itself a judgment. The model cannot score the significance of absence.

Birth time uncertainty. National chart birth times are recorded to varying precision. India's midnight founding is well-documented; others involve historical inference. A 2-hour error in birth time shifts natal Moon by ~1°, affecting nakshatra boundary cases.

Forward caution. Calibration on historical data necessarily overfits to some degree. Forward predictions (Research Note #006) apply additional filters: requiring ≥1 strong signature (lift ≥ 1.5x) active simultaneously, and deduplicating windows within 45-day clusters. This is conservative by design.

7. Implications

The core finding — that chart-specific calibration dramatically outperforms generic transit scoring — has two implications:

First, **not all astrological signals are equal across charts.** The same transit (Saturn conjunct Moon) is historically dominant for India and irrelevant for China. This is consistent with the hypothesis that each founding chart creates a unique resonant axis, and only signals along that axis carry predictive weight.

Second, **backcalibration from historical data is the correct methodology.** Rather than deriving signal weights from textbook importance, we let the historical record determine which signals matter for each chart. This is the same methodology used in any empirical finance or political science model.

Research Note #006 applies these calibrated weights forward to generate validated predictions for 2026–2030.

REPRODUCIBILITY

The full calibration engine (`calibrate.py`), historical event data (`backtest.py`), and calibrated weight outputs (`calibrated_weights.json`) are available on GitHub. All results in this note are reproducible by running `python -m engine.calibrate all` from the repository root.